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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/362,693	07/29/1999	RANDELL L. MILLS	62-226-9A	7170
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MANELLI DENISON & SELTER 2000 M STREET NW SUITE 700 WASHINGTON, DC 20036-3307			KALAFUT, STEPHEN J	
			ART UNIT	PAPER NUMBER

1745

DATE MAILED: 12/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/362,693

Applicant(s)

MILLS, RANDELL L.

Examiner

Stephen J. Kalafut

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 102-205 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 102-205 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 01 March 2006.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

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A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 28 September 2006 has been entered.

Claims 102-205, for reasons of record, are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. See paper nos. 3 and 10.

Claims 102-205, for reasons of record, are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See paper nos. 3 and 10.

Applicant's arguments filed 28 September 2006 have been fully considered but they are not persuasive.

Applicant argues (page 1) that he has submitted with his response "new, non-cumulative scientific evidence" in support of his theory. The IDS submitted on 14 March 2006 includes 13 articles of evidence, including attachments 58, 74, 80, 94, 96, 100, 104 and 110-112, each of which is already of record. Only attachments 113 and 114 are newly submitted. Page 1 of the IDS lists applicant's "Classical Quantum Mechanics", from *Physics Essays*, without any number.

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Applicant argues (pages 4-5), that the “Committee does not even mention, let alone consider, most of the certified experimental evidence” that he has submitted. Contrary to this assertion, the reasons that the evidence has not been persuasive were explained in the Office actions of paper nos. 20041214 and 20050830, and the Appendices attached thereto. Failure to be persuaded is not the same thing as a refusal to consider. Applicant alleges that the “Secret Committee” has dismissed his evidence (pages 22-23), yet faults what he considers “erroneous arguments” in the Appendices of consultary examiner Dr. Souw (page 23), which themselves are a consideration of evidence submitted by applicant.

Applicant repeats his previous argument (page 24) that the “Committee” has nitpicked on “theoretical grounds” and not found any “true fault with any of the data on legitimate scientific grounds”, which falsely assumes that theoretical grounds and scientific grounds are somehow mutually exclusive. The previous Appendices have given both theoretical and experimental reasons for finding fault with applicant’s data. For example, the Appendix to paper no. 20050830 is divided into “Experimental” and “Theoretical” parts.

Applicant argues (page 25) that “the level of support (or acceptance) in the scientific community, not the proper standard for ascertaining whether an applicant has satisfied the enablement or utility requirements of Sections 112 and 101”. The level of support in scientific community is not alleged to be a standard under §101 and §112 *per se*, but merely a reason why the examiner does not consider applicant to have met the standards of these sections, such as enabling an ordinarily skilled artisan to make and use the invention. A disclosure is evaluated for what it teaches to those skilled in the art, such skill evaluated in light of the scientific

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knowledge pertinent to that art. The opinions of the scientific community form part of this background knowledge.

Once again applicant faults the "Committee" for relying on Krieg (page 29), doing so because the "Committee" was "feeling the pressure to back up its claims". Krieg was not cited because of any "pressure", but to address a specific argument raised by applicant, that the "Committee" has failed to find any physical law the applicant has violated. Krieg makes four basic points. First, Krieg states that total energy, identified by the variable "E", is the sum of kinetic and potential energy. Second, he uses the laws of electricity and magnetism to establish the potential energy of the proton-electron system. Third, he used the uncertainty principle to get an order of magnitude estimate for the momentum of an electron for a given orbit, which orbit is identified by its radius as "r". Fourth, he used calculus find the minimum value of "r" by taking the derivative of "E" and setting it equal to zero. Nowhere in applicant's arguments about Krieg are any of these points disputed.

Applicant argues (pages 30-31) that in the Appendix to the Office action of 24 August 2004, Dr. Souw stated that "[t]he PTO's view is not at all that the existence of lower-energy hydrogen were [sic] impossible", which would mean that "lower energy states cannot be in violation of any physical law", and that the "Committee" has taken a contrary position, taking the "ground state of an electron of a hydrogen atom" to be a physical law that applicant has violated. This statement concerning the position of the "Committee" would contradict applicant's assertion (page 24), that the "Committee" has failed to identify any laws that have been violated. However, in stating Dr. Souw's position, applicant omits part of Dr. Souw's statement, where he states that "(a) Applicant's invention is not supported by any experimental

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fact or evidence, and (b) the underlying theory (i.e., GUT/CQM) fails to support the invention, because it contains too many flaws”, the theory that Dr. Souw refers alleging the existence of lower-energy hydrogen. Since the theory behind lower-energy hydrogen is flawed (according to Dr. Souw), their existence is not supported, and the physical law concerning the “ground state” of hydrogen atoms remains accepted by the examiner.

Applicant argues (pages 39-40) that an “*APS News Online Bulletin*, dated August/September 2002, suggests that Dr. [Robert] Park is maintaining his questionable PTO contacts, apparently with the agency's blessing”, thus having knowledge of Patent applications filed during 2002, and not merely of applicant's applications at various times during the year 2000, and further states that the subject matter of such applications “is supposedly kept confidential”. This ignores the fact the Office has been publishing Patent applications under the Pre-Grant Publications program, as early as July 2001, over a year before the date of the above-mentioned *APS News Online Bulletin*. As before, instead of a “Deep Throat” or other improper contact, the *Bulletin* was based on information that was publicly available.

Applicant argues (page 135) that the “Committee” contradicts itself in the statement in the Office action of 09 September 2005, in serial no. 09/362,693, and in the Advisory action of 12 December 2005, in the present application, “which do not necessarily require the use of hydrinos, while applicant's invention (in the present application) deal with methods of making compounds that include hydrinos”. Applicant takes this as an admission that the committee has “been forced to recognize the operability of BlackLight's novel hydrogen technology based on the required use of hydrinos to distinguish it from Dr. Souw's work”. This statement was, and is, in no way whatsoever intended to be taken as an admission that the present examiner, or anyone

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consulted thereby, considers applicant's invention to be operable. The statement was only intended to show how Dr. Souw's work is seen as distinct from, and thus not conflicting with applicant's invention, without regard to its operability or patentability.

Applicant argues (pages 140, 141 and 152) that Dr. Souw has relied on a fraud made by Dr. Andreas Rathke, where Dr. Rathke changes mathematical signs in applicant's equations (1) and (9). Since the articles which Dr. Rathke cites (nos. 24 and 25, on page 8 of his article) are not of record, whether Dr. Rathke has done what applicant alleges cannot be determined.

However, it is noted that equation (1), on page 2 of the Rathke article appears identical to Equation (2) in applicant's attachment 58, except that applicant uses the coordinates "r", "theta" and "phi" within the parentheses, along with "t", whereas Rathke uses only "x" and "t". No signs, such as plus or minus, appear to have been changed.

Applicant argues (pages 152-153) that the "Committee" provides no support for concluding, in "the pending Action", that attachment 113 and 114 speculate hydrino formation as an explanation for data not necessarily caused thereby. The Appendix to paper no. 20041214, on pages 7-12 thereof, offers several different explanations alternative explanations for the Balmer line broadening observed by applicant, and thus support for the conclusion of the "Committee". Because of an oversight, these two attachments were not noted on the PTO-1449 attached to paper no. 20060309. These are acknowledged on the PTO-1449 attached hereto.

Please also note the currently attached Appendix.

This is a Request for Continued Examination of applicant's earlier Application No. 09/362,693. All claims are drawn to the same invention claimed in the earlier application and

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could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the earlier application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Kalafut whose telephone number is 571-272-1286. The examiner can normally be reached on Mon-Fri 8:00 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sjk


STEPHEN KALAFUT
PRIMARY EXAMINER
GROUP 1200

Appendix A

Examiner Souw's Response to Applicant's Appendix Filed

on 5-23-2005 in U.S. Application SN 09/669,877

The present appendix is Examiner Souw's response to Applicant's reply to the Appendix attached to the Advisory Action mailed on 05/12/2005 in application SN 09/669,877 (hereinafter referred to as the previous Appendix). The previous Appendix was also attached to Office Actions in Applicant's copending cases, namely in application SN 09/009,837 mailed on 02/10/2005; in application SN 09/009,455 mailed on 02/09/2005; in application SN 09/111,003 mailed on 02/09/2005; and in application SN 09/225,687 mailed on 02/09/2005. The previous Appendix refers to an earlier Appendix attached to application SN 09/009,837 mailed on 02/11/2004 (hereinafter referred to as the original Souw Appendix). The previous Appendix attached to application SN 09/669,877 refers to topics and page numbers in the amendment filed by Applicant on 8/11/2004 in application SN 09/009,837. The present appendix will only address Applicant's arguments that are relevant to the previous Appendix. Topics not relevant to the merits of the application will not be considered.

I. Theoretical Part (Regarding Applicant's response to Part II of previous appendix)

(1) Sections 60, 68, 71-75, 80, 82-86, 88, 89, 91-94, 96, 97, 100, 103, 110 and 114 of Applicant's present appendix repeat arguments already refuted. In a few cases where there are new citations presented by Applicant, these arguments are incorrect. Applicant has failed to persuasively argue against Examiner's specific refutation in the previous

Appendix. Instead, Applicant keeps insisting his own preposition (GUT/CQM) that has been previously rejected and disqualified by Examiner, while denying the validity of conventional quantum mechanics (referred to by Applicant as standard quantum mechanics, SQM or QM). A typical example of Applicant's insistence is, "*According to SQM textbooks, the electron is in the nucleus. A theory of the hydrogen atom can not be correct if it requires that the electron is in the nucleus*" (as recited on pg. 215 of the appendix in sect. 114, lines 7-8 filed 5/23/2005). In basic quantum mechanics (also known as QM or SQM using Applicant's terminology), the radial electron probability density of hydrogen(like) atom is mathematically defined as $r^2 R_{nl}^*(r) R_{nl}(r)$ (see original Souw Appendix, pg.11, section 9, last paragraph, which also agrees with Applicant's reference, McQuarrie, pg.221), is identically zero at the nucleus ($r=0$), so there is no electron at --or going through-- the nucleus. This single error alone, of which Applicant refuses to admit, despite Examiner's repeated refutations already raised in the previous Appendix (pg.39, last paragraph), demonstrates Applicant's misunderstanding of quantum mechanics. This erroneous argument was previously advanced by Applicant and refuted by the Examiner in the previous Appendix on page 39, last paragraph. Applicant continues to misinterpret QM (quantum mechanics). Another example of Applicant's erroneous argument is Applicant's persistent repetition of nonsensical mathematics, i.e., that Applicant's electron density solution (in the form of a δ -function) does not need to satisfy its generic differential equation. The logical flaw in the mathematics is self-evident, and has been already refuted in the Examiner's previous Appendix on pgs.18 and 20, but insisted again in Applicant's response (see page 45 of appendix filed on 5/23/2005 in U.S. Serial No. 09/669,877).

(2) As per section 59, Applicant's response regarding "curve-fitting" in Condon & Shortley's work is erroneous, since said classic work involves no computer curve fitting at all, but only analytical formulas for transition probabilities and line intensities derived from first principle. This erroneous argument by Applicant illustrates his misunderstanding of QM, while confirming the Examiner's argument that Applicant's GUT/CQM is incapable of predicting/calculating line intensities and transition probabilities as derived by Condon & Shortley and applied by the Examiner in his scientific article cited on pg.17 of the previous Appendix, which does not involve any curve fitting.

(3) As per sections 72, 74, 80, 84, 85, 88, 89 and 91-94, Applicant's entire attempt to justify his misinterpretation of McQuarrie's formulas only reveals his total misunderstanding of his own reference, as laid open on pp.24-32 of the previous Appendix.

(4) As per section 64, the allegation of Examiner's "misunderstanding" Applicant's "invention" is incorrect: the statement that $n=1$ being radiative is Applicant's own statement, as recited in his 83-page amendment in SN 09/009,837 filed 08/11/2004, (as recited in its first line under (A) General Argument). On page 39 of said 83-page document Applicant states: "*Applying Haus's theorem to the point particle that must have radial kinetic energy demonstrates that the Schrödinger solution for the $n = 1$ state of hydrogen is radiative.*" Applicant is confusing the issue and not advancing prosecution

by incorrectly stating that Examiner made certain scientifically incorrect statements when the record clearly indicates that the Examiner did not.

(5) Regarding sections 54, 61-63, 67, 68, 71, 76-78, 82, 83, 86, 87, 90-92, 94, 100, 101, 102, 104, 105, 109, 111, and 115, Applicant attacks the QM (quantum mechanics) and related theories that have been successfully verified over many decades, instead of using the opportunity to refute Examiner's arguments against GUT/CQM and justify his own theory.

(6) As per sections 55, 60-63, 66, 68-70, 74-76, 79, 80, 82, 83, 88, 91, 92, 95,-97, 102-104, 112, 116, 117 and 118, Applicant again cites his own papers that have been previously disqualified as being one or more of the types (a), (b) and (c) recited in the previous Appendix, section (A), and/or citing new references that fall again into the same category.

(7) As per section 54, Applicant presents book reviews of his book "The Grand Unified Theory of Classical Quantum Mechanics" from persons (see for example attached copy of book review by S.T. Brewer of Applicant's book R. Mills, "The Grand Unified Theory of Classical Quantum Mechanics" [online]. Amazon.com, Inc., 1996-2005. [retrieved on 2005-09-16]. Retrieved from the Internet:[URL:www.amazon.com/gp/product/product-description/0963517139/ref=dp_proddesc_0/104-0714117-9071922?%5Fencoding=UTF8&n=283155](http://www.amazon.com/gp/product/product-description/0963517139/ref=dp_proddesc_0/104-0714117-9071922?%5Fencoding=UTF8&n=283155), which is identically reproduced in Applicant's present appendix) having no authority/expertise in any of the following

pertinent areas: 1) advanced physics with a thorough understanding and knowledge of Quantum Mechanics (QM) which Applicant has alleged he has refuted with his own flawed theory, or 2) plasma physics which Applicant is heavily relying on to provide experimental support for his flawed theory. Even if the book reviewers (Drs. J. Phillips, S.T. Brewer, G. Landvogt, J.J. Farrell) might have some expertise in the pertinent area, their expert opinion does not have any weight as Opinion Evidence in case of §112/¶1 rejection applied in the instant case, since it is not supported by factual evidence. See MPEP § 716.01(c). *In re Chilowsky*, 306 F.2d 908, 134 USPQ 515 (CCPA 1962) (expert opinion that an application meets the requirements of 35 U.S.C. 112 is not entitled to any weight; however, facts supporting a basis for deciding that the specification complies with 35 U.S.C. 112 are entitled to some weight); *In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992) (declarations of seven persons skilled in the art offering opinion evidence praising the merits of the claimed invention were found to have little value because of a lack of factual support).

(8) As per sections 56-58, 60, 62, 64, 81, 87, 88, 95, 99, 111 and 112, merely stating that the Examiner is wrong is not a valid argument.

(9) Regarding sections 65, 98 and 106-108, philosophy is totally irrelevant to the real world, as already recited in the previous Appendix. Even more irrelevant is philosophical arguments in patent examination, since philosophy belongs to non-statutory subject matter.

(10) Conclusion: Since **NONE** of sections 54-116 of Applicant's 05/23/05 response is persuasive, the entire Theoretical Part of the previous Appendix, and hence, the Examiner's rejection of Applicant's hydrino/GUT/CQM theory, as brought up in the original Souw Appendix, stand unrefuted by Applicant. The claims based on Applicant's flawed hydrino/GUT/CQM theory, thus remain appropriately rejected under § 101 and § 112/¶1.

II. General Arguments and Experimental Parts

As in the previous Theoretical Part, a majority of Applicant's response is again based on irrelevant arguments such as philosophical arguments, allegations that the Examiner made certain incorrect scientific statements when the record clearly indicates that the Examiner did not, and Applicant's continued misinterpretation of Quantum Mechanics.

(11) Applicant's irrelevant arguments are found in the following sections of his response:

► Specifically regarding sect. 25, the references Cvetanovic and Jovicevic et al. do not confirm Applicant's results, as claimed by Applicant, since none of them ever recites hydrino (see also later Sections 42-51).

► Specifically regarding sections 27 and 53, there are a plethora of phenomena not yet explainable by presently existing theories, so far. This situation is fully acceptable and also understandable, since it represents evidence that science is in (perpetual) development. However, Applicant's GUT/CQM cannot possibly provide a valid explanation for reasons that have been clearly formulated in the previous Appendix on

pg.21. In order to qualify as scientifically valid, a theory must satisfy definite criteria. Among others, it must be logically (i.e., mathematically) correct and free from contradiction, both with known natural laws as well as with itself, in addition to being supported by experimental evidence. As already explained in detail throughout the previous Appendices, Applicant's GUT/CQM does not satisfy these criteria.

(12) Sections 28-30, 34 and 37 consist of scientifically unfounded assertions by Applicant, since Applicant's GUT/CQM has been already refuted in the previous Appendix. Contrary to Applicant's assertions, he has not disproved Quantum Mechanics. As stated by Applicant in section 34, Applicant's CQM is the first to predict novel lower-energy states of hydrogen. He is the first to predict such states because these new states of hydrogen are not supported by or accepted by conventional science.

► Specifically regarding Sect.29, Marchese's Final Report contradicts Applicant's claim of superior rocket thrust and/or excessive heat production, but only conform to the conventional thrust and/or heat from ordinary chemical reaction.

► Specifically regarding Sections 30 and 37, arguments for the incredibility of GUT/CQM have been unambiguously specified in the previous Appendix and discussed at great lengths in the previous consecutive actions, without any persuasive counter-argument from Applicant.

(13) As per Sections 28, 31, 32, 33, 35, 37-39 and 43-52, these sections again cite Applicant's own papers that have been previously disqualified for being one or more of

the types (a), (b) and (c) recited in the previous Appendix, section (A), and/or citing new references that fall again into the same category.

► Specifically regarding Sections 46 and 48, the few references cited on pg.52 and 57 written by authors other than Applicant do not mention any hydrino or GUT/CQM.

(14) In sections 32, 35, 36, 39, 40 and 53, Applicant makes irrelevant arguments.

► Specifically regarding Sect.32, nitrogen is a gas, which is not to be compared with specific hydride(s) claimed by Applicant, which is a solid.

► Specifically regarding Sections 35-36, Applicant's recitation of elements other than helium does not remove Applicant's error of misidentifying the He-II line as being of hydrino origin.

► Specifically regarding Section 39, the Examiner has never recited that an impurity is an oxidation state, as claimed by Applicant on page 33.

► Specifically regarding Section 40, the previous Appendix clearly identifies lines 1-2 below Fig.29 in Marchese's Final Report, which recites, word for word, "*As shown in Fig. 29b, the measured C* values are on the same order as those measured for chemical rocket propulsion, which is reasonable for the first proof of concept test.*" In his 05/23/2005 Response/Appendix, Applicant has cited a different text that is nowhere to be found in Marchese's original Final Report. Nevertheless, Applicant's recitation does not even support Applicant's claim of "excessive heat", but only increased heat (point V on page 26).

(15) In section 38, Applicant's claim of hydrino hydride's hardness is the only nebulous hardness throughout this prosecution, since the corresponding hardness of all other hydrides are known in hard numbers. As such, Applicant's argument of nebulous hardness of a substance is irrelevant.

(16) In section 41, Applicant argues that his results were reproduced by EarthTech and Marchese. The Examiner strongly disagrees for reasons stated in the previous Appendix. The facts in the record clearly support the Examiner's position when one refers to the Earth Tech and Marchese reports.

(17) Sections 42-51 recite various arguments regarding Doppler broadening:

► Specifically regarding Sections 44-49, in contradiction to Applicant's claim of alleged support of Applicant's hydrino (or GUT/CQM) theory, the 2005 paper by Cvetanovic et al. (also Jovicevic et al. 2004) is totally silent about hydrino, fractional hydrogen energy levels, and/or GUT/CQM, while unambiguously disproving Applicant's RTM model, as recited on page 033302-2 col.1/2nd full paragraph and on pg.033302-7,col.2/1st full paragraph, and refuting Applicant's RTM model in at least 5 conspicuous points. All those reference papers cited on pg.57 merely confirm excessive broadening in hydrogen lines, the latter remaining a well known phenomenon for many decades, even observed by the Examiner himself as far back in 1985 in relation with his work performed at the Air Force Wright Aeronautical Laboratories reported in ref.[10] of Part II of the previous Appendix. As already explained, in order to be correct, a theory must be logically and mathematically flawless and free of contradiction. In order to be true, a theory must be

firstly correct, and further, verified by experimental observation. Applicant's GUT/CQM is mathematically flawed and full of contradiction. Its alleged "experimental evidence" is only argued by Applicant, but never self-evident, or, it is even contradicted by the scientific community, such as by Cvetanovic et al.

► Specifically regarding Section 50, Doppler-free laser spectroscopy recommended by the Examiner is insofar important, as it would ultimately clarify the longstanding puzzle regarding the origin of excessive broadening in hydrogen lines. It is unscientific to make an unsupported statement that the Doppler-free laser spectroscopic line width would be negligible in comparison to the observed broadening, since such measurement has never been actually made in the entire history of hydrogen line broadening anomaly. If and only if it turns out that the Doppler-free (i.e., homogenous) line width is within the conventionally known natural line width can one conclusively conclude that the observed broadening is inhomogeneous (Doppler). However, it may well turn out that the Doppler-free line width is effectively as broad as the observed line width, e.g., in the form of plasma satellites or microwave satellites (Blochinzew effect).

► Generally regarding Sections 42-51, Applicant has clearly misunderstood the diverse units conventionally used to represent line broadening data, as well as their interpretation in light of homogeneous broadening (such as, natural line width or oscillation damping, broadening due to electron impact, static ion field, microwave effects), as opposed to inhomogeneous broadening (such as translational energy spread due to the Doppler shift). It is conventional to express line width measurement data in equivalent units of cm^{-1} , [Hz], and/or [nm]. These units are all equivalent and can be easily converted from one to another by one of ordinary skill in the art. The corresponding conversion formulas

have been previously given in the previous Appendix on page 9-10. These formulas may be verified with the cited references (ref. [9],[10] cited in Part I of the previous Appendix) as well as with any textbook or scientific publication in plasma spectroscopy, such as, e.g., Conversion Table cgs/SI-Units ([online]. [retrieved on 2005-09-16]. Retrieved from the Internet: <URL: www.plasmaphysics.org.uk/convers.htm>) regarding the conversion formulas and the units, and Equation 31 of a paper by S. Johansson and S. Letokhov in Astronomy & Astrophysics 378 (2001) pp. 266-278, regarding the Doppler shift/broadening formula. Thus, according to this general knowledge in the art, Luggenholscher's line width of $\delta\lambda=0.16$ nm is equivalent to $\delta\sigma=3.7$ cm^{-1} (with $\sigma=1/\lambda$) or $\delta\nu=111$ GHz, and Applicant's $\delta\lambda=0.27$ nm is equivalent to $\delta\sigma=10.0$ cm^{-1} or $\delta\nu=188$ GHz (using the basic formula $\delta\nu=c\cdot\delta\sigma$, which is the same as, and hence, giving exactly the same result as $\delta\nu/\nu=\delta\lambda/\lambda$).

While the conversion wave number $\sigma=1/\lambda$ [cm^{-1}] and oscillation frequency ν [Hz] into energy units [eV] is straightforward, conversion of the corresponding line widths $\delta\sigma$ and $\delta\nu$ into energy units [eV] is not possible without considering the homogenous and inhomogenous contributions to the line broadening, i.e., either as damping energy of the oscillating electron, or as translational or kinetic energy of the moving atom, the latter involving the atomic or nuclear mass). Presuming that homogeneous line width is predominant and the inhomogeneous contribution is negligible, Luggenholscher's $\delta\lambda=0.16$ nm (homogeneous) line width is equivalent to an electron oscillation energy spread of $\delta E_{\text{hom}}=0.45$ meV (**NOT** 4.5 meV, as calculated by Applicant and recited on pages 45 and 57), and Applicant's $\delta\lambda=0.27$ nm (homogeneous) line width is equivalent to $\delta E_{\text{hom}}=0.76$ meV (i.e., using the basic formula $E_{\text{hom}}=h\cdot\nu$ and $\delta E_{\text{hom}}=h\cdot\delta\nu$). However,

assuming the line broadening is predominantly Doppler, the same line width converts to an atomic translational/kinetic energy by virtue of the Doppler formula given on page 10 of the previous Appendix, to give $E_{\text{Doppler}} \approx 15 \text{ eV}$ for Luggenholscher's data, and $E_{\text{Doppler}} \approx (0.27/0.16)^2 \cdot 15 \text{ eV} = 43 \text{ eV}$ for Applicant's data. The intermediate case where the contributions of homogeneous and inhomogeneous broadenings are both not negligible is well known in the art, but here not discussed, since it would not help clarify Applicant's present misunderstanding of converting line widths to different units.

Applicant's comment in Section 48 on page 57 is scientifically unsound: (a) The fact that the Examiner does not use the same conversion formula as Cvetanovic's (2005) does not at all mean that the Examiner's method and results are incorrect. Applicant's allegation is incorrect, insofar as the Examiner's method conforms with the conventional method generally known in the art (ref.[9],[10] cited in Part I of the previous Appendix, and new references, Conversion Table cgs/SI-Units ([online]. [retrieved on 2005-09-16]. Retrieved from the Internet: <URL: www.plasmaphysics.org.uk/convers.htm>) and S. Johansson and S. Letokhov in Astronomy & Astrophysics 378 (2001) pp. 266-278, cited above); (b) the Examiner's calculation is based on Luggenholscher's as well as Applicant's experimental data, but not at all on Cvetanovic's, so there can be no requirement for the Examiner to conform with Cvetanovic's method (which is known in the art to differ by a factor less than one order of magnitude due to Cvetanovic's use of highly directed atomic beam, as opposed to assuming a random distribution of atomic velocities); (c) despite the differences (in his analysis/formula Cvetanovic et al. includes collisional effects in a highly directed atomic beam), the Examiner's result is also consistent with Cvetanovic's, as demonstrated in Table 1 below.

To help Applicant clarify his misunderstanding of elementary plasma spectroscopy, and to clearly elucidate the significant difference between electron oscillation damping energy in case of homogeneous broadening and atomic kinetic or translational energy in case of inhomogeneous Doppler broadening, the Examiner will make use of his past experience as Professor in Applied Physics at a reputable US university (please refer to his short biography in the 2003 SPIE article already known/cited by Applicant) and give the following detailed example.

An atom with oscillating electron that radiates is here made equivalent to a jet fighter that radiates communication electromagnetic waves at 1 GHz in all directions. The typical mass of a jet fighter (e.g. F-16) is roughly 10,000 kg, or 10^7 gm. Assuming a homogeneous radiation line width (as determined by the Q-value of the oscillator circuit) of 1 kHz, we thus have a homogenous line width ratio of $\delta\nu/\nu=10^{-6}$. Assuming this homogeneous line width is due to oscillator damping (i.e., the so-called natural line width), the corresponding oscillator energy spread is $\delta E_{\text{hom}}=h\cdot\delta\nu=4\cdot10^{-12}$ eV. On the other hand, assuming the same line width is predominantly due to Doppler shift (which becomes an isotropic broadening in case of a large number of radiating jet fighters randomly flying in all directions, equivalent to a random velocity distribution of radiating atoms) the same amount of line width $\delta\nu/\nu=10^{-6}$ corresponds to a velocity of $V/c=\delta\nu/\nu=10^{-6}$, i.e., a (mean) aircraft velocity of $V=300$ m/s, which is a plausible subsonic velocity. The Doppler or kinetic/translational energy is $E_{\text{Doppler}}=0.5\cdot m\cdot V^2 = 3000$ eV. We thus see, although the oscillation energy spread is even smaller than 0.001 eV, the

corresponding kinetic energy of the entire radiator (equivalent to the atomic translational energy) is even larger than 100 eV.

For ultimate comparison, the various equivalent units for expressing the experimental data of Luggenholscher, Applicant, Cvetanovic et al. and the jet fighter are shown in Table 1 below. The numerical values for Cvetanovic's data are taken from Fig.5 that represents cases with negligible homogeneous broadening and calculated according to the undergraduate scaling formula: $E_{\text{Doppler}} \sim (\delta\lambda)^2$, which can be verified using Cvetanovic's own data, $83 \text{ eV} = (0.46/0.40)^2 \cdot 62 \text{ eV}$ (QED), further showing consistency with Luggenholscher's data, $E_{\text{Doppler}} = (3/2) \cdot (0.16/0.46)^2 \cdot 83 = 15 \text{ eV}$, and also with Applicant's data, $E_{\text{Doppler}} = (3/2) \cdot (0.27/0.46)^2 \cdot 83 = 43 \text{ eV}$, wherein the factor 3/2 is introduced to reconcile Cvetanovic's case-specific result referring to a highly directed velocity distribution with the random velocity distribution assumed in a conventional Doppler broadening case (see formula on page 10 of the previous Appendix). Table 1 demonstrates a general consistency of the numerical results.

TABLE 1

	Luggenholscher	Applicant	Cvetanovic et al.	Jet Fighter
$\delta\lambda$	0.16 [nm]	0.27 [nm]	0.46 / 0.40 [nm]	---
$\delta\sigma$ [cm^{-1}]	3.7 [cm^{-1}]	10.0 [cm^{-1}]	---	$3 \cdot 10^{-8}$ [cm^{-1}]
$\Delta\nu$ [Hz]	111 [GHz]	188 [GHz]	---	1.0 [kHz]
δE_{hom} (Oscillator energy spread)	0.45 [meV]	0.76 [meV]	---	$4 \cdot 10^{-12}$ [eV]
E_{Doppler} (Doppler kinetic energy)	15 [eV]	43 [eV]	83 / 62 [eV]	3 [keV]

Note: to save time, the Examiner performed only back-of-the-envelope calculations. Therefore, the above tabulated numerical values are accurate within 10%. This accuracy is by far more than enough to refute Applicant's scientifically incorrect allegation that the Examiner's line broadening numbers were wrong by **SIX ORDERS OF MAGNITUDE in H energy** (Sect. 44 on page 45). Especially Applicant's consecutive wording "***in H energy***" is in grave error, because the oscillator energy spread in [meV] is purely determined by the energy of the oscillating electron and its damping/Q-value, and does not involve the atomic mass of hydrogen, and hence, has nothing to do with "*H energy*", the latter only making sense in case of Doppler broadening (15 eV).

With the above comparisons, the Applicant's repeated allegations in his responses that the Examiner's line broadening numbers were wrong by **SIX ORDERS OF MAGNITUDE** has no basis.

(18) In section 55, Applicant alleges that his hydrino is confirmed by a variety of experimental results.

These experimental results are irrelevant to support Applicant's theory since applicant does not address the First Principle issue raised in the previous Appendix. Alleged match with experimental data from a scientifically invalid theory (GUT/CQM) based on flawed logic and physical concepts & principles, thus leading to totally arbitrary results, does not justify the theory. Furthermore, results from Applicant's own experiments that are unverified or even contradicted by other independent researchers

(e.g. EarthTech, NASA, Cvetanovic et al. (2005), Jovicevic et al. (2004)) are not valid as scientific evidence.

(19) With respect to sections 56-58, Applicant repeats arguments that have been fully addressed in the previous Appendix.

In these sections, Applicant merely contradicts the Examiner's arguments. Applicant continues to misunderstand elementary wave theory.

(20) With respect to section 59, applicant's allegation of computerized curve fitting regarding the QM theory of Condon & Shortley is based on Applicant's total misunderstanding of this classical work in physics. Condon & Shortley's formulas are all analytic, and hence, does not need any computer curve fitting. Thus, Applicant's attempt to "refute" Examiner's Appendix is groundless.

(21) With respect to section 60, see response to section 67 below:

(22) In section 61, applicant does not argue against Examiner's refutation of Applicant's GUT based on mathematical flaws and conceptual errors as recited in the original Souw Appendix. Consequently, those flaws and errors stand unrefuted. Instead, Applicant attacks the Feynman and Heisenberg principle in SQM using mathematically flawed and conceptually erroneous arguments.

(23) With respect to section 62, the erroneous point source basis of Applicant's GUT has been addressed in the original Souw Appendix, which stands unrefuted, because Applicant's response is a mere contradiction without any counter-argument. Unrefuted is also the Examiner's demonstration given in the original Souw Appendix that Applicant's derivation of density function is mathematically wrong and conceptually incorrect while also being in contradiction with Haus's theory.

(24) With respect to section 63, applicant does not argue that the Examiner's proof in the previous Souw Appendix that Applicant's analysis based on Haus theorem is mathematically and physically flawed. Instead of addressing the Examiner's argument,, Applicant attacks the conventional QM (Quantum Mechanics).

(25) With respect to section 64, Applicant's mere allegation of "not having even a basic understanding" without ever refuting the mathematically and physically sound demonstration of the original Souw Appendix is not persuasive. The original Souw Appendix stands therefore unrefuted.

(26) With respect to section 65, Laloe's comments on SQM is philosophical, which is totally irrelevant to the real world, as already recited in the original Souw Appendix. Philosophical dispute is even more irrelevant for patent examination procedure, since philosophy belongs to non-statutory subject matter.

(27) With respect to section 66, applicant's recitation "other theoreticians, such as those at Princeton University" is unpersuasive, since it does not recite any name, or any scientific work other than Applicant's own paper(s), all of which having been determined invalid as support in this instant application. Applicant's tentative recitation of E.H. Lieb's article is flawed and also misleading, since Lieb does not mention anything about hydrino. The fact that SQM contains parts that need improvement is scientifically acceptable, since (a) no physical theory is all encompassing, and (b) there would otherwise be no progress in science. In comparison, the GUT is unacceptable, simply because it is mathematically flawed and in contradiction with the existing physical laws, as described in the original Souw Appendix.

(28) With respect to section 67, contrary to Applicant's assertions, the scientific community agrees with Feynman and Lieb, both being consistent and coherent with the Heisenberg's Uncertainty Principle. Thus, Applicant's argument is unpersuasive. Applicant's reference to the Buliaro et al. article is unpersuasive, because, also like Feynman and Lieb, the Buliaro et al. the article does not recite hydrino.

(29) With respect to section 68, applicant's allegation that the correspondence principle (CP) is incorrect, is against the conventional understanding of physics, as known to those ordinarily skilled in the art, and hence, unpersuasive.

(30) With respect to section 69, applicant's allegation that "the Examiner's error is confirmed by other physicists" is unfounded, because (a) no physicist is named, nor is

any article quoted by Applicant, and (b) Applicant's allegation is merely a contradiction, not an argument, for failing to present any counter-argument against Examiner's facts that has been thoroughly demonstrated in the original Souw Appendix regarding formulas (1.59) to (1.68) and Eq.(1) to (5) of Applicant's GUT.

(31) With respect to section 70, applicant's citation of his own papers against the Dirac's theory is unpersuasive, since the Dirac's theory is well accepted by the scientific community and mathematically sound (P.A.M. DIRAC, NOBEL PRIZE IN PHYSICS, 1933, FOR THE DISCOVERY OF NEW PRODUCTIVE FORMS OF ATOMIC THEORY), whereas Applicant's GUT/CQM underlying Applicant's cited papers has been proven wrong, for reasons stated in the original Souw Appendix, which stands unrefuted. Therefore, Applicant's arguments against the Dirac theory remains unpersuasive.

(32) With respect to section 71, applicant's has failed to provide a mathematical proof as requested by the Examiner, i.e., that Applicant's electron density function does satisfy Applicant's own wave equation. Applicant's inability to provide mathematical proof illustrates just one of the numerous mathematical flaws and conceptual errors in GUT/CQM, as addressed in detail in the original Souw Appendix.

(33) With respect to section 72, Applicant's use of McQuarrie's formula for rigid-rotator has been proven incorrect in the 05/23/2005 Appendix. Since McQuarrie's formula itself has been proven by the Examiner as being consistent with the conventional SQM,

Applicant's error shows that Applicant has misunderstood his own reference, thus disqualifying Applicant's entire argument. Thus, not only is Applicant's argument unpersuasive, it is not even a valid argument, but only a mere contradiction against Examiner's mathematical proof, without presenting any counter-argument and/or mathematical counter-proof. Therefore, Applicant's insistence that his δ -function does not need to satisfy --or must not be a solution of-- the wave equation, is here reconfirmed as being a violation of the basic laws of physics and mathematics. Applicant states on page 130 in the appendix filed on 5/23/2005 in U.S. Serial No. 09/669,877 that "[t]he Examiner's comment about Applicant's argument being 'unpersuasive because Applicant's response contradicts the mathematical requirement that any valid solution must satisfy the generic equation' is not well taken. On which physical law is this statement by the Examiner based?"

In response to Applicant's contention, the Examiner's statement is based on one of the fundamental principles of mathematics where a function must solve the equation in order for it to qualify as and be called a solution of the equation.

(34) With respect to section 73, applicant's interpretation of Haus's radiation condition has been demonstrated in the original Souw Appendix as being inconsistent with Haus's theory, and the corresponding derivation in Applicant's GUT also has been proven as mathematically flawed, and hence, invalid as counter-argument. Applicant's claim of "rigorously solved" is unsupported by the facts in the record, since Applicant has failed to provide the rigorous proof so far requested by the Examiner, i.e., that Applicant show

that Applicant's solution for electron density function is a valid solution of the corresponding wave equation which Applicant has not done so.

(35) With respect section 74, as already shown in the original Souw Appendix, Applicant's angular momentum wavefunctions have been mathematically proven incorrect. Furthermore, Applicant's derivation of angular momentum functions using McQuarrie's formula for rigid-rotator also has been proven incorrect in the last 05/23/2005 Appendix. On the other hand, it has been also proven by the Examiner that McQuarrie's formula is consistent with the conventional SQM. Thus, Applicant's mistake shows that Applicant has misunderstood his own reference, and disqualifies Applicant's entire arguments. Consequently, the Examiner's refutation of Applicant's angular momentum wave functions, as well as the Examiner's judgment that Applicant's misunderstands the SQM, are here reconfirmed.

Applicant's further citation of his own papers is unpersuasive evidence, since all those papers are based on a flawed theory (GUT) not supported by any experimental evidence, and hence, they all have been disqualified as support in this prosecution.

(36) With respect to section 75, applicant's claim that GUT or CQM "unifies Maxwell's equations, special and general relativity with atomic physics" is scientifically unfounded, since it has been demonstrated in the original Souw Appendix, as well as in the follow-up Appendices, that Applicant's CQM is in direct violation of Maxwell's equations, special and general relativity and atomic physics. Therefore, Applicant's assertion is a mere contradiction of Examiner's extended proofs, without giving any counter-proofs.

Applicant's additional arguments regarding "top-quark" and "fundamental particles" are recited out of context and must be deemed incredible, since Applicant has totally failed to argue against the main issues in Examiner's refutation, as brought up in the original Souw Appendix as well as the follow-up Appendices. Consequently, the Examiner's judgment regarding Applicant's violations of Maxwell's equations, special and general relativity and atomic physics, is herewith reconfirmed.

(37) With respect to section 76, applicant's attack against SQM is misplaced as well as misleading since it totally misses the Examiner's point, i.e., that "there are plenty of *a priori* basis for a theory to be incorrect, i.e., if the theory is incredible, illogical, and/or self-contradictory, such as GUT or CQM". Therefore, Applicant's argument is deemed unpersuasive, and hence, the CQM stands incredible, illogical, and/or self-contradictory, as already brought up in the original Souw Appendix and in the following Appendices, which are herewith reconfirmed .

Instead of adequately defending against Examiner's arguments, Applicant attacks SQM by predicting alleged "infinities" without any proof, thereby revealing Applicant's own misunderstanding of the most elementary foundations of physics. Consequently, Applicant's unsupported assertions regarding Maxwell and Einstein's Relativity theories are not given further consideration.

(38) With respect to section 77, Applicant's comments regarding demonstrated deficiencies of CQM is a mere contradiction without any counter-argument.

(39) With respect to section 78, this section will be addressed in the Experimental Section below.

(40) With respect to section 79, applicant's misunderstanding of the correct definition of current density in applying the Haus's condition remains factually unrefuted for reasons given in the previous appendices. Consequently, Applicant's formal and conceptual mistake in handling the Haus's radiation condition is herewith confirmed.

(41) With respect to section 80, applicant's failure to argue against his mistake regarding the density δ -function has been sufficiently discussed in the previous sections 74 and 76, and hence, will not be addressed herein. Furthermore, these two sections also disclose Applicant's failure to understand his own McQuarrie reference.

(42) With respect to section 81, applicant's claim of a "successful application of special relativity" is a mere contradiction without any support against a mathematical exposition of Applicant's misunderstanding and mis-application laid open by the Examiner in the original Souw Appendix.

(43) With respect to sections 82-83, applicant's response confirms Applicant's misunderstanding of eigenfunctions and wave functions, since Applicant's angular momentum functions are wave functions, not eigenfunctions of the angular momentum operator, as already brought up in the original Souw Appendix. Furthermore, not only is

Applicant's renewed attack against SQM unjustified, but more importantly, it is without support. Applicant's citation of his own papers is unpersuasive, since such papers is based on flawed mathematics and conceptual errors, and have been thus disqualified as support in this prosecution.

(44) With respect to sections 84, 85, 88, 89, and 93, applicant's failure of persuasively arguing his misunderstanding of his own reference, McQuarrie, as demonstrated in the 05/23/2005 Appendix, has been adequately discussed in previous sections 74 and 76, and hence will not be addressed herein. It is important to emphasize, Applicant's misunderstanding of his own reference, as demonstrated in the last Appendix, ultimately disqualifies Applicant's entire arguments regarding the subject matter of Quantum Mechanics (QM or SQM). Applicant's renewed attack on SQM by citing a new reference (Fowles, referring to section 84), as well as Applicant's own papers (sections 85 and 88), is not only misplaced but also unpersuasive, for being based on Applicant's misunderstanding of the SQM fundamentals, as already brought up in the original Souw Appendix and the following ones. Applicant's attacks on SQM do not change the fact that Applicant's GUT/CQM does not agree with physical laws and mathematical principles.

(45) With respect to section 86, Applicant's removal of Y_{00} from his basis set is well documented in Applicant's main reference (GUT); as such, Applicant's mistake in removing Y_{00} out of the complete set of angular momentum eigenfunctions is clearly evident in the record. Applicant's counter-attack on SQM is totally misplaced and

unpersuasive, since SQM does not contain this fundamental mathematical error that is present in Applicant's theory.

(46) With respect to section 87, the SQM is fully consistent with the Heisenberg Uncertainty Principle, whereas Applicant's CQM has been proven inconsistent, and hence, incorrect. Applicant's renewed attack on SQM based on Applicant's own invalid paper does rectify the insufficiencies of Applicant's CQM.

(47) With respect to section 90, contrary to Applicant's assertions, the SQM is widely acknowledged as being the most successful theory in the entire history of physics. On the other hand, Applicant's GUT/CQM has not received even a single acknowledgement from the scientific community; and most importantly for this prosecution, it has been proven wrong in the original Souw Appendix and confirmed by all following Appendices. None of the demonstrated mistakes in Applicant's theory has been successfully argued by Applicant. Therefore, CQM is rejected as a valid basis for any of Applicant's experiment.

(48) With respect to sections 91, 92, and 94, the use of Pauli wave functions is well established in physics. The Pauli wave functions are mathematically correct and also supported by a large number of experimental measurements (including Examiner's own works/publications). On the other hand, Applicant's GUT/CQM is full of mathematical flaws and conceptual errors, as explained up in the original Souw Appendix and all the

following Appendices, without Applicant ever being able to present a single persuasive counter-argument.

Applicant's failure of persuasively arguing his grave misunderstanding of his own reference, McQuarrie, as demonstrated in the 05/23/2005 Appendix, has been thoroughly discussed in previous sections 72, 74, 76, 84, 85, 88, 89 and 93. Therefore, they do need to be repeated again. However, it is here important to emphasize, that Applicant's misunderstanding of his own reference, as demonstrated in the last Appendix, ultimately disqualifies Applicant's entire arguments regarding the subject matter of Quantum Mechanics.